UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Price Formation in Energy & Ancillary Services	)	
Markets Operated by Regional Transmission	)	Docket No. AD14-14-000
Organizations and Independent System Operators	)	

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Electric cooperatives' goal is to deliver reliable, and affordable, electric power to our member owners over the long-term. This requires resources adequate to meet both current and future consumer demand, including sufficient generating capacity, fuel diversity and appropriate fuel security to ensure reliability. As not-for-profit private businesses, our focus and obligation is to serve our member-owners. In a very real sense, we are consumer advocates.

COOPERATIVE PERSPECTIVE ON PRICE FORMATION AND UPLIFT

When we look at price formation in RTO/ISOs regions, we ask whether prices in the centralized and bilateral markets accomplish a few very basic goals – efficient dispatch of resources in the short term at the lowest cost for consumers, and in the long-term, attract investment insufficient generating capacity (MWs); a diverse generation portfolio; and, fuel security. In short, the issues are (1) whether the prices optimize our utilization of the resources we have today, and (2) more importantly, whether those prices produce what is needed tomorrow given the somewhat heroic challenges the industry is facing, particularly with regard to new environmental regulations.

Based on what transpired during the Polar Vortex, we think the answer to both questions today is "no," or at the very least, not yet. This conclusion should not surprise anyone familiar with the industry. When the decision was made to functionally unbundle wholesale power services from transmission services and create regional operators to see if the concept worked well enough to ensure reliability, it was generally understood that the model design could not accommodate the inherent non-convexity of the industry nor model all grid constraints. Consequently price formation constructs at most RTO/ISOs have been continually evolving.

Simply put, we do not believe that the current constructs will address emerging near-term and longer-term needs. In the short term, the markets do a pretty good job. But, as the high level of uplift this last winter demonstrates, we've not yet completely mastered the efficient dispatch of resources in the short-term, at least when the system is under stress. As I'll discuss more later, not all uplift is inefficient, but I think we probably had more than was ideal this last winter.

It is the longer-term, with its massive expected shift to natural gas-fired generation, that is NRECA's greatest concern. The centralized markets today do not adequately address long-term needs because the current constructs are short-term in nature, fail to recognize or value the need for fuel diversity and fuel security, and in some RTO/ISOs, they actually undermine opportunities for bilateral markets within their regions to address the needs of market participants.

Short term price signals, no matter how well they optimize short-term dispatch decisions, are an ineffective tool for encouraging investment in long-term resources. We should not fool ourselves into thinking that we will somehow solve all of the industry's challenges if we can just get those short-term centralized market prices right. You cannot build a house with nothing but a hammer, no matter how good that hammer is.

This suggests to us that it may be time for FERC and the industry to step back and take a hard look at where we are headed given that much of the non-gas capacity and surplus the market has relied on for the past 15 years is clearly going away due principally to EPA rules on Maximum Achievable Control Technology (MACT) Standards and New Source Performance Standard (NSPS) for Existing Plants, and lower cost natural gas. And, as we shift to far more natural gas and renewables, we are expecting far more market volatility and related risks for consumers, suggesting an additional focus for that review.

In the meantime, we believe we need to take what we learned from the events of this past winter's Polar Vortex, take what we know about the impact of EPA MACT and NSPS for Existing Plants, and develop more certain answers to what appears to be significant emerging near-term and longer-term threats to reliability. Simple changes to price formation at RTO/ISOs, while they may be appropriate and helpful, will not in and of themselves be sufficient to provide the proper price incentives and solutions to the near-term and long-term problems we face.

UPLIFT AND PRICE FORMATION

Let's next turn to the specific price formation issues identified by FERC in its notice for this Technical Conference: use of uplift payments; offer price mitigation and offer price caps; scarcity and shortage pricing; and, operator actions that impact prices. With perhaps the exception of operator actions that affect prices, the first three topics identified by FERC are the result of energy and ancillary services market designs created by RTO/ISOs and the discovery over time that those designs by themselves have proved incapable of achieving both efficient competitive prices and revenues sufficient to encourage investment in appropriate generation to ensure Resource Adequacy.

With regard to uplift, the methodologies used by RTO/ISOs to perform unit commitment and dispatch, and to calculate market prices directly lead to uplift. The actual level of uplift charges are the result of many factors, including market pricing, market design, unit commitment decisions by operators and the existing mix of resources. Uplift is an "after-the-fact" cost to LSEs and as such generally cannot

be fully hedged or mitigated. That may cause problems for some LSEs, particularly those which are solely commodity based.

Having said that, we know of no approach developed so far that can effectively and entirely eliminate the need for uplift payments to generators. Nor should that necessarily be the goal. First, it is generally true that on average uplift costs are a very small percentage of market prices. Second, such payments may be least cost solutions to many grid problems, particularly some costs related to extreme balancing of operator reserves (BOR). Third, uplift can be used effectively to remedy important reliability and policy issues of concern -- such as fuel diversity and environmental compliance. On the other hand, as the FERC Staff Report in this proceeding identifies, the basic cause and cure for persistent concentrated uplift appears to be a subject for more transparency (visibility), and planning to remove the basis of same. In short, some short-term episodic uplift can be cost-effective for consumers, but chronic, consistent, concentrated uplift requires consistent, concentrated review and analysis -- and implementation of cost-effective solutions where feasible, particularly through the transmission planning processes of the RTO.

Our conclusions with regard to uplift is that uplift is and can be an appropriate cost-effective tool to resolve certain types of grid problems if used properly, so elimination of all uplift should not be the focus or the objective here. However, RTOs and ISOs should investigate cost-effective transmission infrastructure improvement to eliminate persistent, concentrated uplift. Additionally, RTOs and ISOs should identify and minimize the sources of substantial, repetitive deviations between Day-Ahead and Real-Time offers and schedules. Finally, RTOs and ISOs need to develop clearer procedures, guidelines and communication processes not only with the generators being dispatched but with all market participants (transparency) to minimize overly-conservative operator dispatch during times of extreme stress.

PRICE MITIGATION AND PRICE CAPS

As far as Price Mitigation and Price Caps are concerned, these were put in place by RTO/ISOs because of the inevitable situation that at certain times grid congestion can facilitate the exercise of market power. The other reason prices have been mitigated and capped is that regulators want to protect retail consumers from high prices even when those high prices reflect scarcity instead of market power, and extreme price spikes such as those caused by the Polar Vortex. The clear implication of price mitigation and price caps is that under certain circumstances generators as-bid offers are reduced to cost or some generators are not permitted to offer and set market-clearing price. If these generators are dispatched nonetheless, and their costs are higher than the market clearing price, they receive uplift credits.

Thus, in extreme cases the price cap/mitigation results in either a potential loss for generators or a significant increase in uplift costs. However, the call for all costs to be represented in locational clearing prices to the greatest extent possible would apparently have the effect of eliminating most of the price mitigation/cap rules, and would ultimately reward all existing generation with higher LMPs but

not necessarily increase the supply of existing capacity locally. We believe a much more reasonable approach would appear to be to recognize that, at certain times, the price of energy plus reserves must rise to reflect scarcity.

SCARCITY PRICING AND UPLIFT

As for Scarcity Pricing and Uplift, various tweaks to market designs have in the past been about how to make up for the basic flaws in price setting methods that are incapable of producing both prices that would induce profit maximizing generators and loads to voluntarily follow least-cost commitment and dispatch without guarantees that costs will be fully compensated (*i.e.*, through uplift, and effective investment signals). But scarcity prices that operate both as a short-term balancing tool and a long-term investment signal appears to us to be an impossibility, particularly if the RTO/ISO has a capacity market that is not residual and crowds out the bilateral market, or worse yet, significantly increases the risks and costs of the bilateral markets via inappropriate minimum offer price rules (MOPR). In any case, in an attempt to remedy this situation, some RTO/ISOs have implemented imperfect scarcity pricing rules and created capacity constructs to make up for the shortcomings of market design, price setting and price constraints. Even here, as we learned from the Polar Vortex, current capacity construct rules need considerable review and adjustment, adjustments to ensure they produce not only sufficient MWs of generation, but also appropriate fuel diversity and fuel security. To us, this review could include a more realistic re-visit of capacity definitions (minimum levels of performance, availability, etc.); and possibly evaluating capacity de-ratings or capacity rewards, and seasonal options, among others. Further, the level of existing market penalties for generator non-performance also needs to be reconsidered as we believe, based on an analysis of the Polar Vortex, a few of the existing force majeure-type exclusions from non-performance penalties could have been managed in advance. Such cost-effective "manageable" types should therefore be eliminated from force-majeure-type protections. More importantly, however, is the question of the appropriate role of capacity constructs -- should they be residual or not. Our conclusion is that if the capacity construct is to be residual and encourage the bilateral market, then many of these above-mentioned problems simply go away because of the vested self-interest of self-supply.

Once again, the above underscores the need for FERC and the industry to step back and view these issues in their entirety, while going ahead with the adjustments that are needed given the lessons learned from the Polar Vortex. However, we do not conclude that simply changing price formation rules will be sufficient.

Finally, this workshop (and the variety of interests represented on the various panels today) focused on how to address the issue of uplift, and it may indeed lead to various partial solutions. But it has also driven home to me a point. The continual revision of market rules by RTOs/ISOs to address one problem or another with the result intended to serve one particular market segment or another, seems to have lost sight of the reason for the existence of the grid: To serve end-use consumers, and the vital role played by the bilateral market in doing that.

Respectfully submitted,

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